

Modification of starch with cationic polymers and use of modified starches as paper dry strength enhancer.

5 Abstract

A process for modifying starch by heating starch in an aqueous medium to temperatures above the gelatinization temperature of said starch comprises effecting said modifying of said starch in
10 the presence of

(a) a polymeric cationizer selected from the group consisting of the polymers containing vinylamine units and having molar masses of up to 1 million, the polyethyleneimines, the
15 polydiallyldimethylammonium chlorides, the condensates of dimethylamine with epichlorohydrin or dichloroalkanes, the condensates of dichloroethane and ammonia, and the mixtures thereof,

20 and

(b) polymeric papermaking drainage aids selected from the group consisting of the water-soluble crosslinked polyamidoamines with or without an ethyleneimine graft, the polymers
25 containing acrylamide and/or methacrylamide units and having molar masses of more than 1 million, the polymers containing vinylamine units and having molar masses of more than 1 million, and the mixtures thereof.

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